The 60 rotations of 6 elements
(excludes mirrors (x2) & cyclics (xC)

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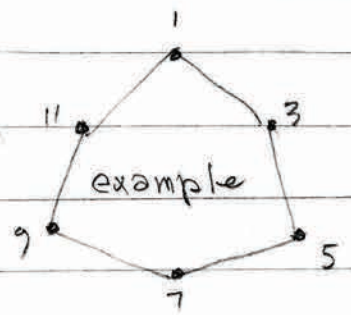
1 3 5 7 9 11 x	1 3 11 5 7 9	1 5 11 3 7 9	1 9 11 3 5 7 x
7 11 9 x	5 9 7	3 9 7	3 7 5 x
9 7 11	7 5 9	7 3 9	5 3 7 x
9 11 7 x	7 9 5	7 9 3	5 7 3 x
11 7 9	9 5 7 x	9 3 7 x	7 3 5 x
11 9 7 x	9 7 5 x	9 7 3 x	7 5 3 x

1 3 7 5 9 11 x	1 5 7 3 9 11 x	1 7 9 3 5 11	How many ways to get from the 1357 tetrad to it opposite? Look for some sequence of 1357 together, (or 911 continuous). 30 ways, indicated (x). Half of all ways.
5 11 9 x	3 11 9 x	3 11 5	
9 5 11	9 3 11	5 3 11	
9 11 5 x	9 11 3 x	5 11 3	
11 5 9	11 3 9	11 3 5 x	
11 9 5 x	11 9 3 x	11 5 3 x	

1 3 9 5 7 11	1 5 9 3 7 11	1 7 11 3 5 9
5 11 7	3 11 7	3 9 5
7 5 11	7 3 11	5 3 9
7 11 5	7 11 3	5 9 3
11 5 7 x	11 3 7 x	9 3 5 x
11 7 5 x	11 7 3 x	9 5 3 x



Partitioned Triadic Cross-Sets
In the (3,6) 1,3,5,7,9,11 Eikosany

Jan 2, 1997

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Read first Partitioned Cross-Sets of the Hebdomekontany, 1989 by E.M. Wilson, Pages 4 and 5. Then look at Fig 4 of D'Alessandro, 1989, XH XII, E.M. Wilson. Now, then—

In the (3,6) Eikosany the (1,3) Triany forms a partitioned cross-set with the (2,3) triany. There are 20 combinations by which this partitioning may occur. Please note; the (2,3) triany carries a concealed sub-harmonic triad. Example

($\overline{5}$ $\overline{3}$ T) is concealed in

X	(1.3	1.5	3.5)	
7	1.3.7	1.5.7	3.5.7	} Eikosany terms. (Tonic is 1.3.5)
9	1.3.9	1.5.9	3.5.9	
11	1.3.11	1.5.11	3.5.11	

And we see above the result is a set of 9 Eikosany terms. Interestingly, each of these ties back to the tonic term 1.3.5 ! by virtue of 2 shared elements. When 1.3.5 is taken as 1/1 the cross-set appears in the following quasi-diamondic form;

X	$\overline{5}$	$\overline{3}$	$\overline{1}$	
7	7/5	7/3	7/1	} diamondic terms (Tonic is 1/1)
9	9/5	9/3	9/1	
11	11/5	11/3	11/1	

Again— there are 20 permutations of this beauteous geometry, imbedded in the Eikosany. These are the 20 bonding-sites between Eikosany & Diamond — as sets of 10 terms. Also please see fig 15 of D'Alessandro.

A complete pentadic cross-set can be made as shown;

×	2	3	5	7	11
2	2·2	2·3	2·5	2·7	2·11
3	3·2	3·3	3·5	3·7	3·11
5	5·2	5·3	5·5	5·7	5·11
7	7·2	7·3	7·5	7·7	7·11
11	11·2	11·3	11·5	11·7	11·11

Scarcely concealed within the cross-set is the 2-out-of-5 combination-product set of the master set 2, 3, 5, 7, 11. This can be formatted as shown: ↘ Ref. 3-out-of-5 ↘ also of interest

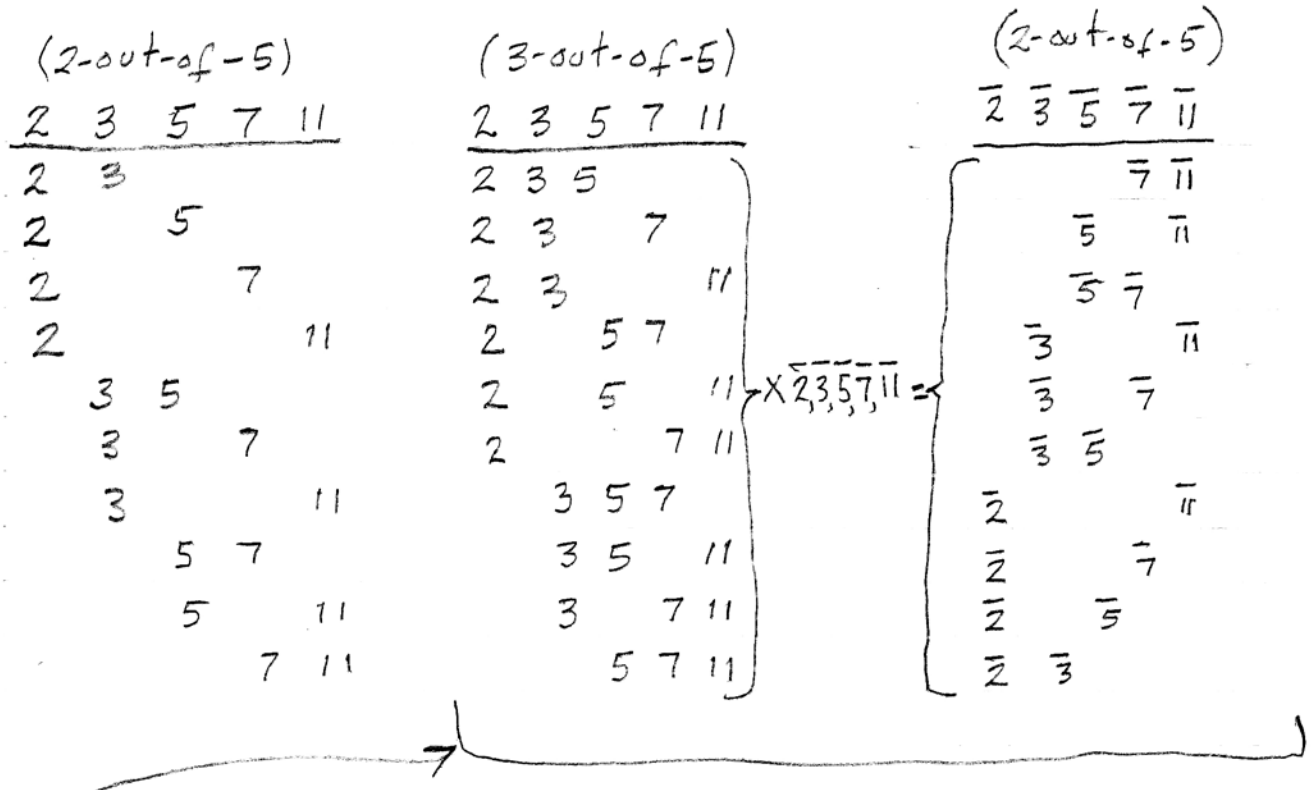
$\binom{2}{5}$ 2 3 5 7 11

2 3
2 5
2 7
2 11
3 5
3 7
3 11
5 7
5 11
7 11

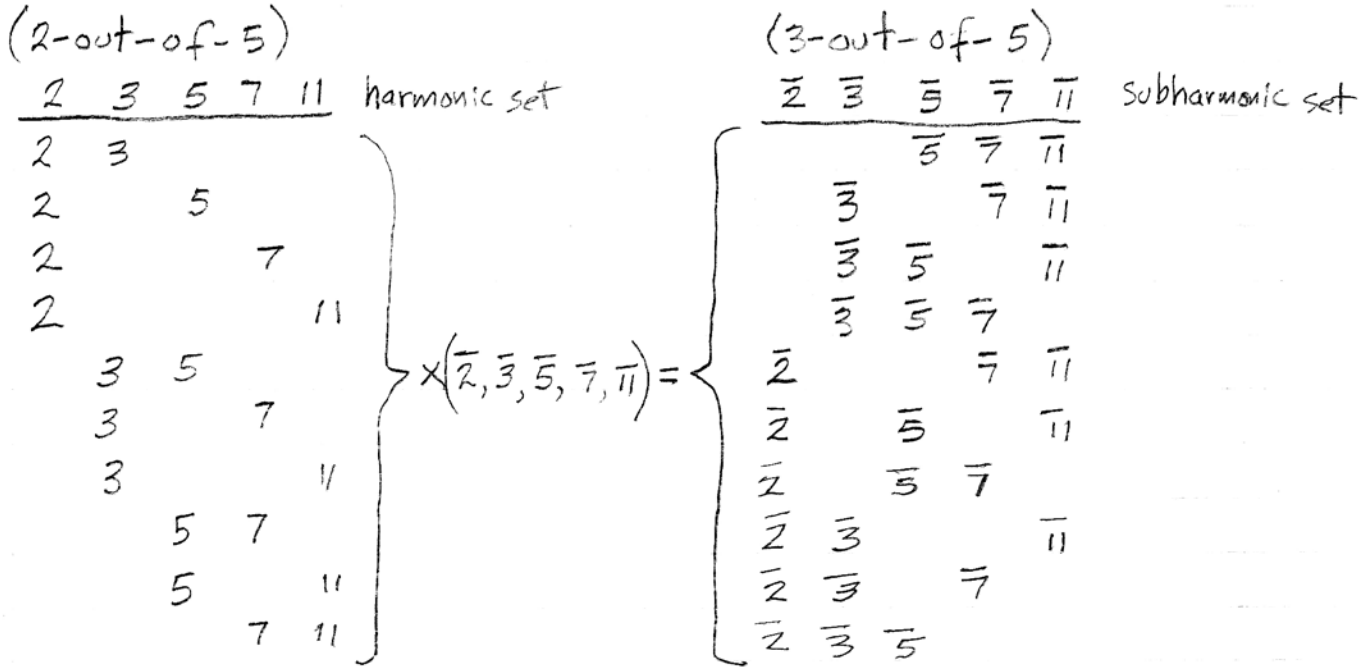
$\times \overline{2,3,5,7,11} =$

$\binom{3}{5}$ $\overline{2}$ $\overline{3}$ $\overline{5}$ $\overline{7}$ $\overline{11}$

$\overline{5}$ $\overline{7}$ $\overline{11}$
$\overline{3}$ $\overline{7}$ $\overline{11}$
$\overline{3}$ $\overline{5}$ $\overline{11}$
$\overline{3}$ $\overline{5}$ $\overline{7}$



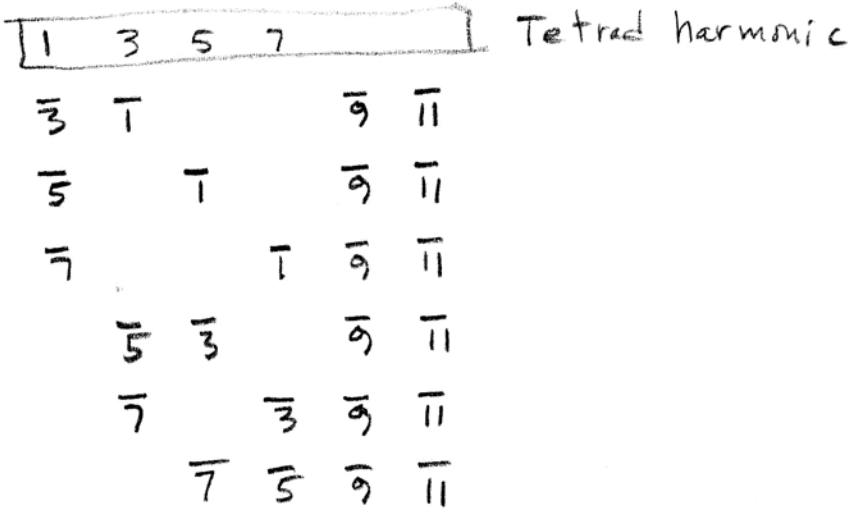
This operation shows how the $\binom{3}{5}$ or 3-out-of-5 set can be the subharmonic mirror of the $\binom{2}{5}$ or 2-out-of-5 set. Likewise, to fill out the picture:

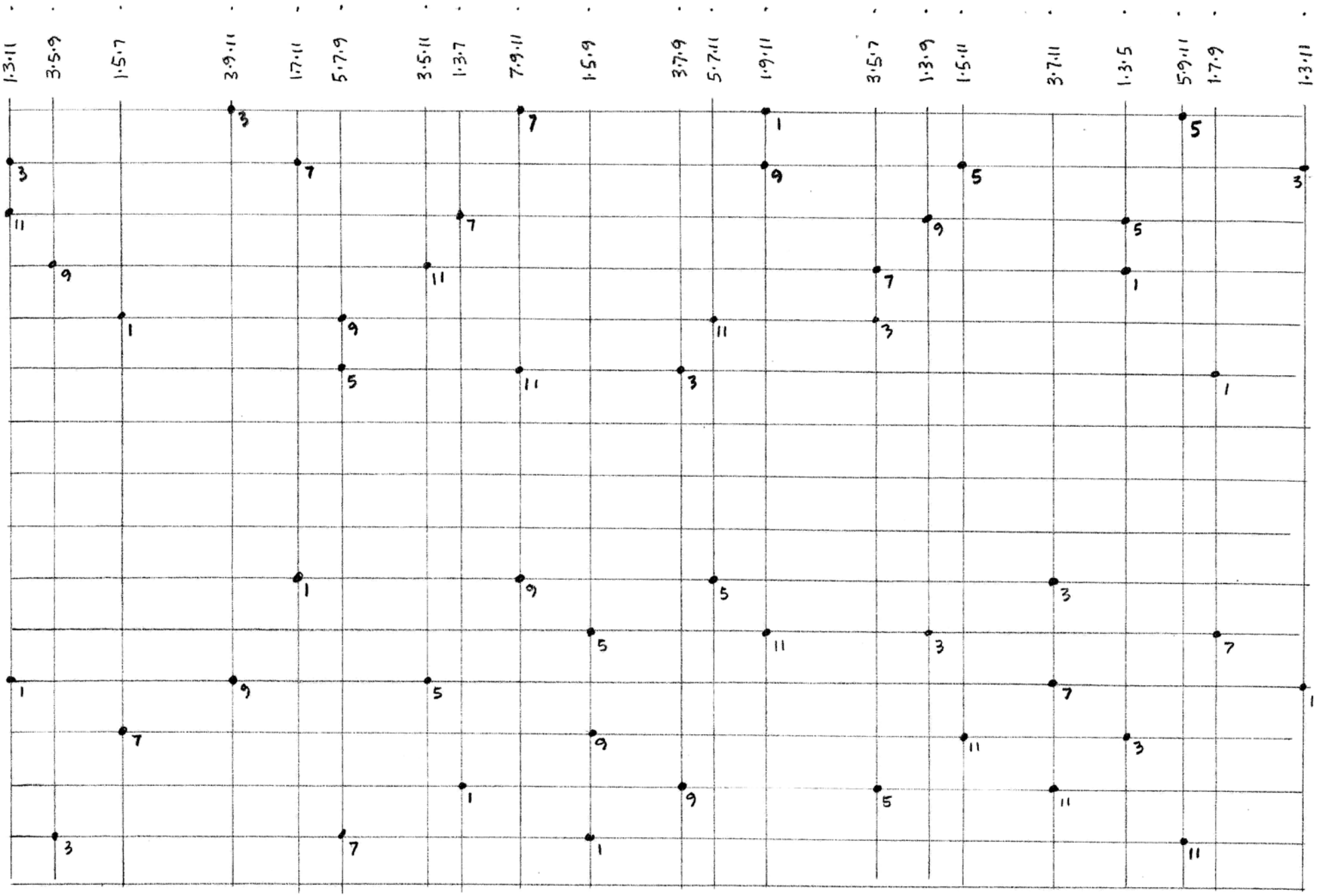


$\binom{0}{5}$ $\binom{1}{5}$ $\binom{2}{5}$ $\binom{3}{5}$ $\binom{4}{5}$ $\binom{5}{5}$

1 5 10 10 5 1

Each harmonic tetrad connects with 6 subharmonic tetrads with 2 common tones:





2 cycles of Tetrads © E.W 1981

Complementary Dekagrams of the 1·3·5·7·9·11 Eikosagram

Aspect: 11 3 5 7 9 - Ear-training Exercise

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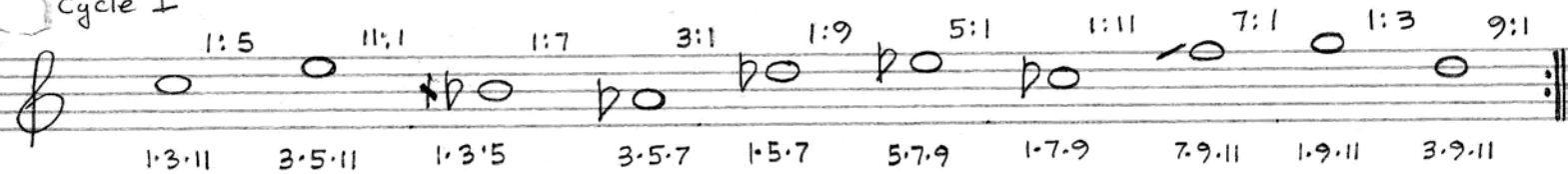
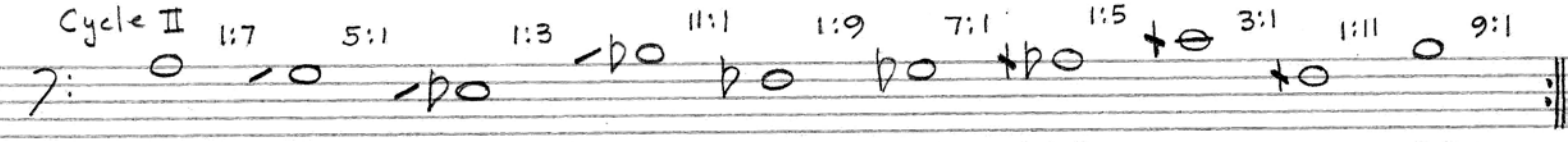
Cycle I

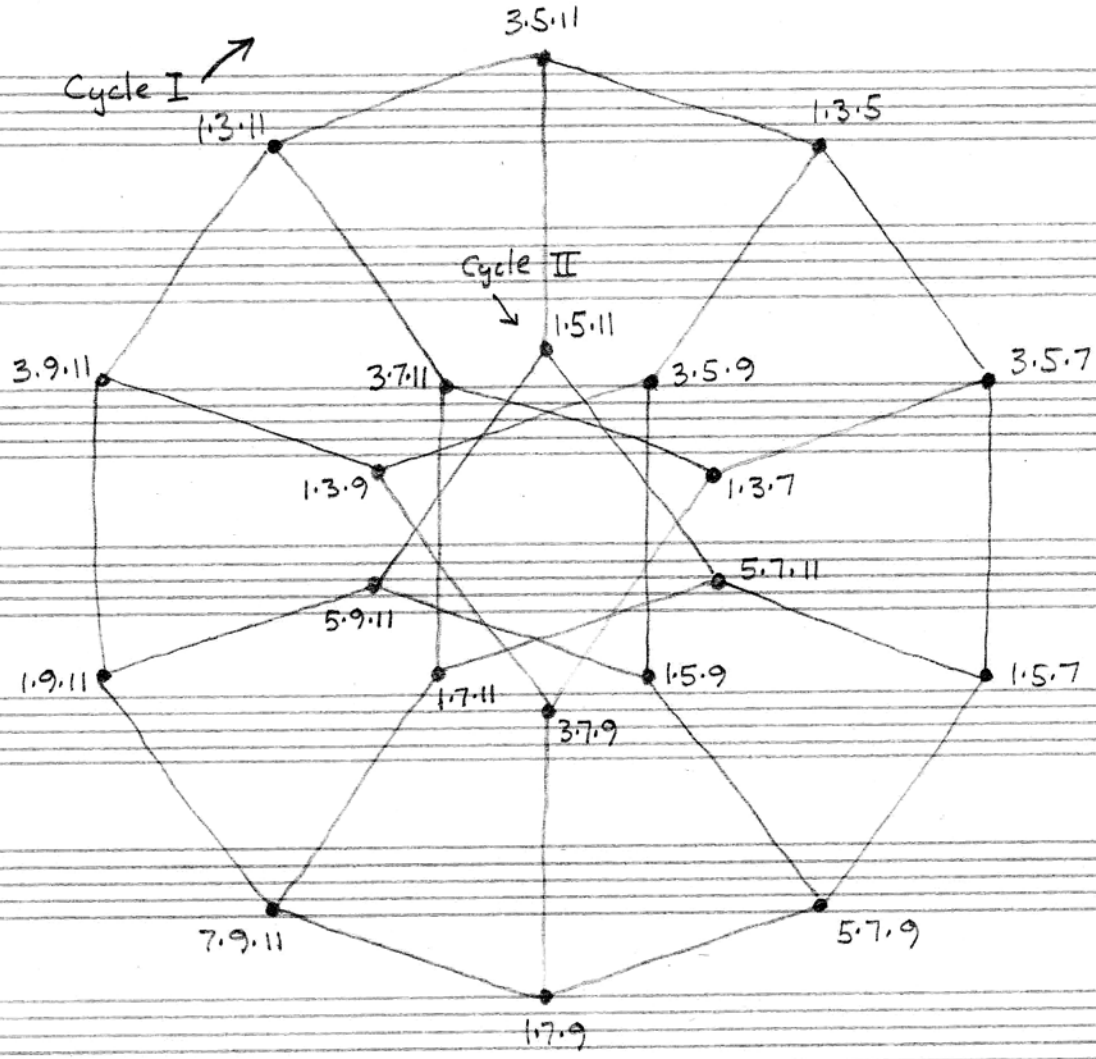


	1·3·11	3·5·11	1·3·5	3·5·7	1·5·7	5·7·9	1·7·9	7·9·11	1·9·11	3·9·11
Tuning	264	330	480	420	280	315	252	346.5	396	297

Cycle II

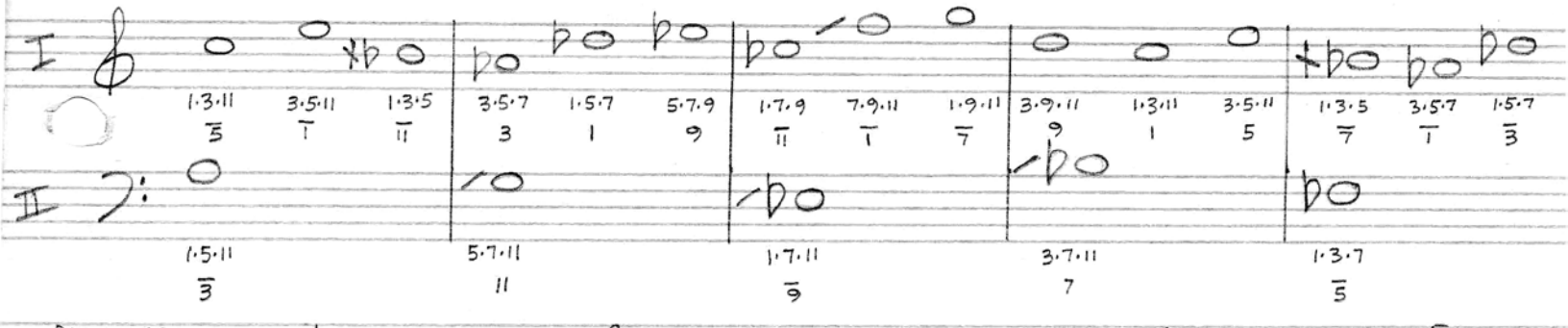


	1·5·11	5·7·11	1·7·11	3·7·11	1·3·7	3·7·9	1·3·9	3·5·9	1·5·9	5·9·11
	440	385	308	462	336	378	432	270	360	495

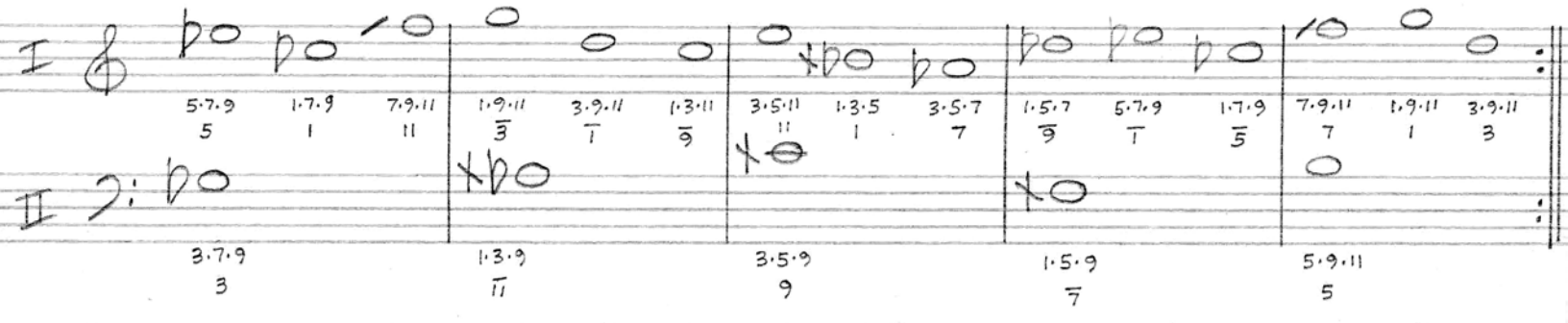


Complementary Dekagrams 1·3·5·7·9·11 Elkosagram

1st Version

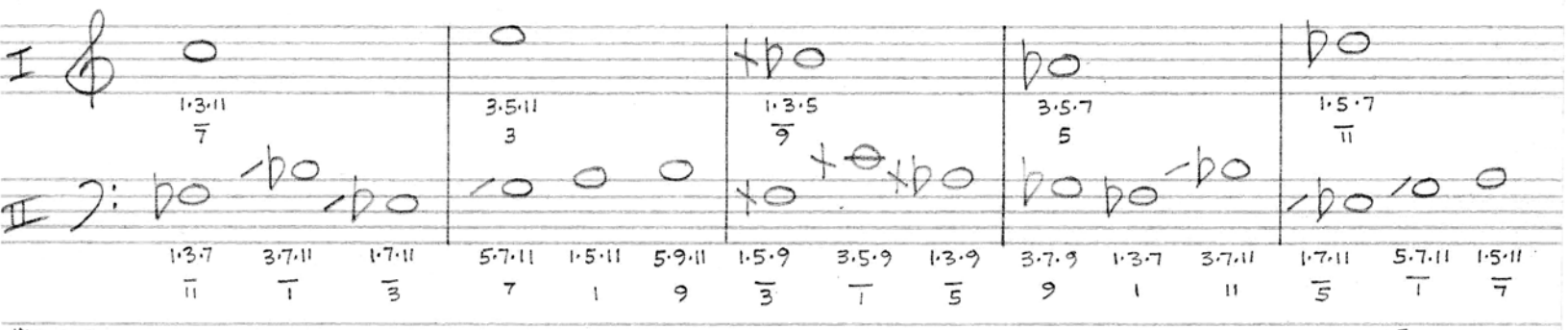


measure 1. 2. 3. 4. 5.

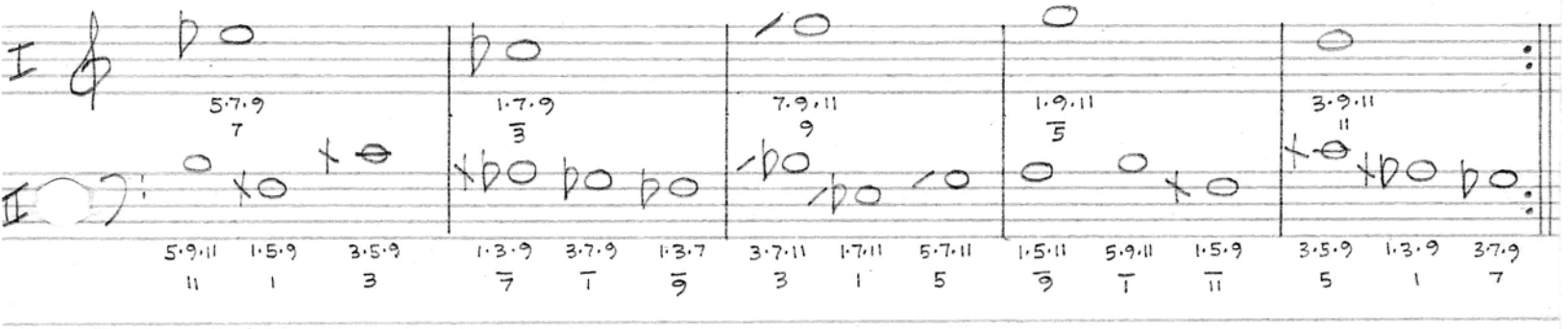


6. 7. 8. 9. 10.

2nd Version



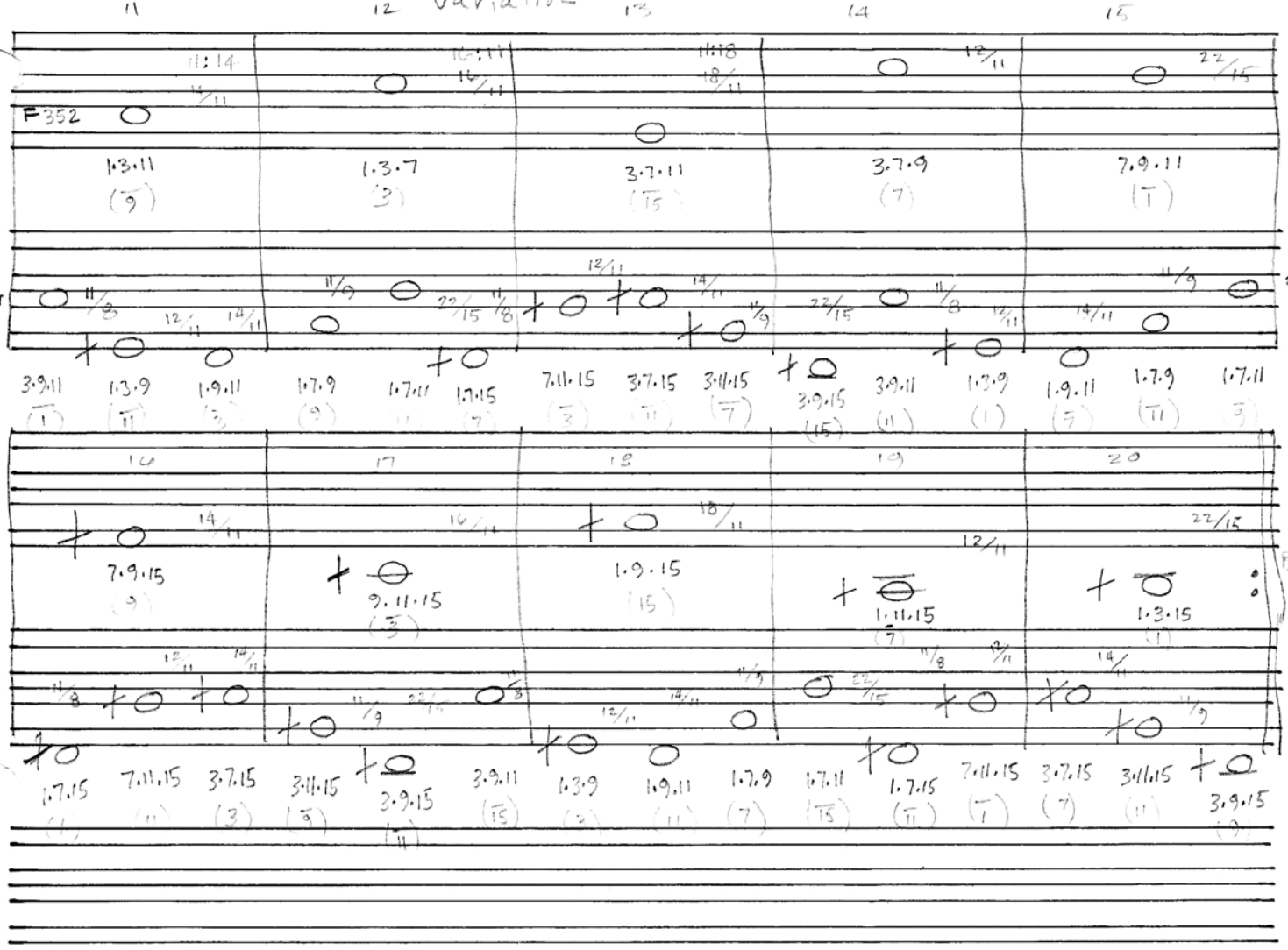
measure 11. 12. 13. 14. 15



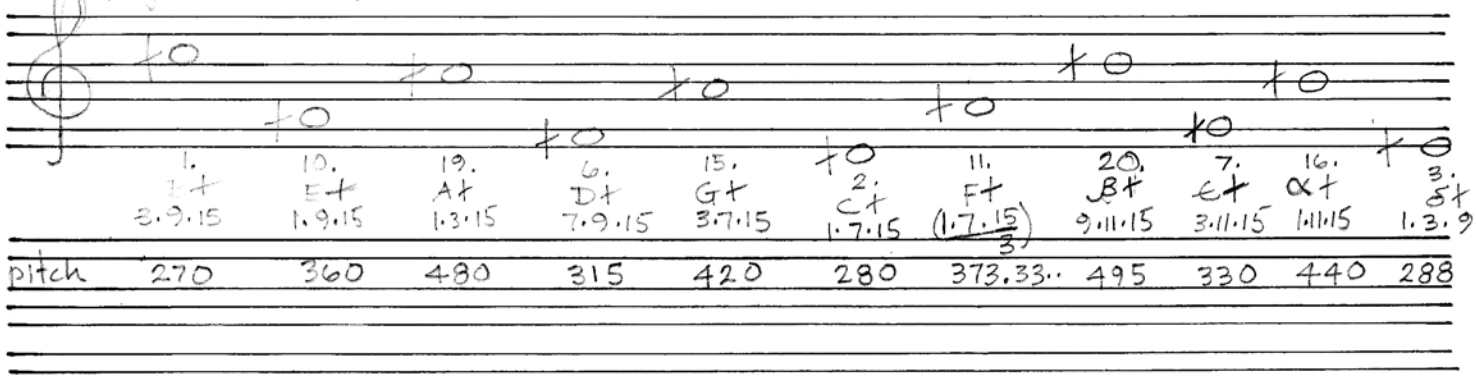
16. 17. 18. 19. 20.

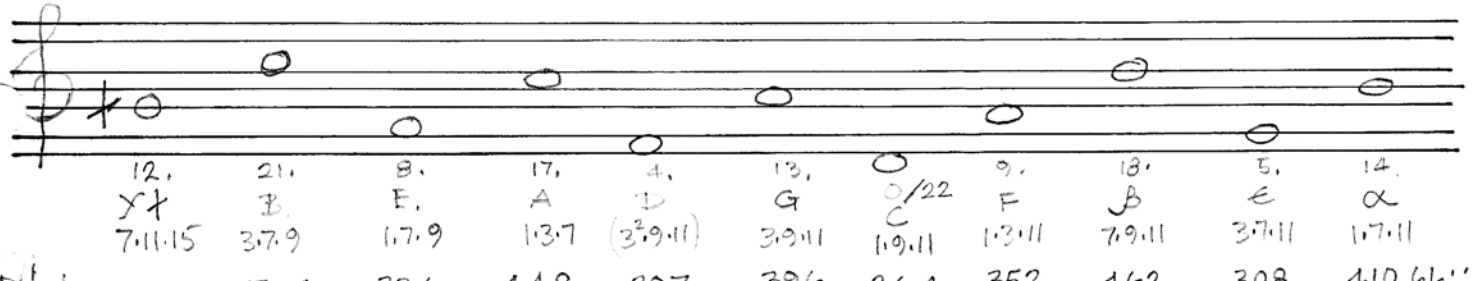
Tree Toad

Variation

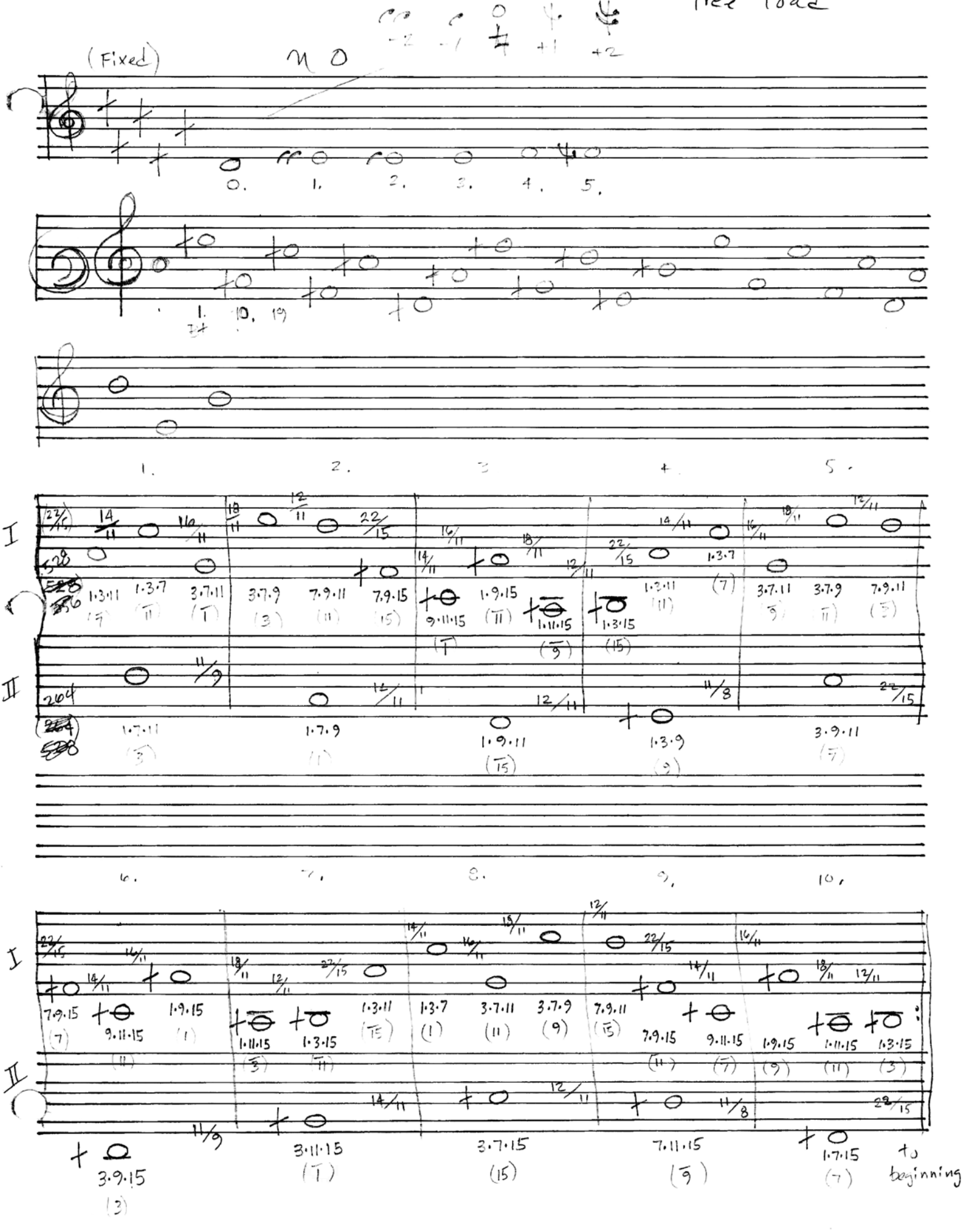


Scale: Keyboard series:





Tree Toad

melodic

(Fixed)